

Application Number 09/858,185  
Amendment dated October 29, 2004  
Reply to Office Action of July 29, 2004

Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of claims:

1. (Currently Amended) A temperature control system for a workpiece chuck comprising:
  - a fluid circulation system for circulating a temperature control fluid through the workpiece chuck; and
  - a fluid recovery system coupled to the fluid circulation system for recovering the temperature control fluid from the fluid circulation system, the fluid recovery system comprising:
    - a gas inlet for allowing gas to be forced into the fluid circulation system and circulated through the fluid circulation system to carry a first portion of recovered temperature control fluid through the fluid circulation system,
    - a reservoir receiving the gas circulated through the fluid circulation system and the first portion of recovered temperature control fluid, the reservoir comprising an outlet above the temperature control fluid in the reservoir, the gas and the first portion of recovered temperature control fluid received by the reservoir displacing a portion of the gas with vapor of the temperature control fluid out of the reservoir through the outlet above the temperature control fluid in the reservoir,
    - a heat exchanger for receiving the displaced gas with vapor and condensing the vapor to produce a second portion of recovered temperature control fluid,
    - a separator for receiving the displaced gas and the condensed second portion of the recovered temperature control fluid and separating the displaced gas

from the condensed second portion of the recovered temperature control fluid, and  
a fluid line for carrying the condensed second portion of the recovered  
temperature control fluid from the separator to the reservoir.

2. (Original) The temperature control system of claim 1, wherein the temperature control fluid comprises a hydrofluoroether (HFE).
3. (Original) The temperature control system of claim 1, wherein the temperature control fluid comprises methoxy-nonafluorobutane (C<sub>4</sub>F<sub>9</sub>OCH<sub>3</sub>).
4. (Original) The temperature control system of claim 1, wherein the gas forced through the fluid circulation system is air.
5. (Canceled)
6. (Canceled)
7. (Canceled)
8. (Previously Presented) The temperature control system of claim 1, wherein the fluid recovery system further comprises a gas line for venting separated gas from the separator to the atmosphere.
9. (Currently Amended) A method for controlling temperature in a workpiece chuck comprising:  
providing a circulation system for circulating a temperature control fluid through the workpiece chuck; and

coupling a fluid recovery system to the fluid circulation system for recovering the temperature control fluid from the fluid circulation system;

circulating a gas through the fluid circulation system to carry a first portion of recovered temperature control fluid through the fluid circulation system;

providing a reservoir for receiving the gas circulated through the fluid circulation system and the first portion of recovered temperature control fluid, the reservoir comprising an outlet above the temperature control fluid in the reservoir, the gas and the first portion of recovered temperature control fluid received by the reservoir displacing a portion of the gas with vapor of the temperature control fluid out of the reservoir through the outlet above the temperature control fluid in the reservoir,

routing the displaced gas with vapor of the temperature control fluid to a heat exchanger, the heat exchanger condensing the vapor of the temperature control fluid to produce a condensed second portion of the recovered temperature control fluid,

routing the displaced gas and the condensed second portion of the recovered temperature control fluid to a separator, the separator separating the displaced gas from the condensed second portion of the recovered temperature control fluid, and

routing the condensed second portion of the recovered temperature control fluid from the separator to the reservoir.

10. (Original) The method of claim 9, wherein the temperature control fluid comprises a hydrofluoroether (HFE).
11. (Original) The method of claim 9, wherein the temperature control fluid comprises methoxy-nonafluorobutane (C<sub>4</sub>F<sub>9</sub>OCH<sub>3</sub>).
12. (Original) The method of claim 9, wherein the gas forced through the fluid circulation system is air.

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13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Previously Presented) The method of claim 9, further comprising venting separated gas from the separator to the atmosphere.